

WHAT IS CLAIMED IS:

1. An image processor comprising:

dot-area extraction means for extracting a dot area in an image based on image data of a subject image; and

moire-removing spatial filter means for performing a process of limiting spatial frequency components of the extracted dot area to an image data portion corresponding to the dot area,

wherein the moire-removing spatial filter means has a characteristic of attenuating an entirety of the spatial frequency components to be contained in the image and further attenuating or removing a predetermined spatial frequency component liable to cause moire appearance.

2. The image processor of claim 1,

wherein the characteristic of the moire-removing spatial filter means is defined by a matrix given by a convolution operation of a matrix defining a characteristic of a first filter for attenuating or removing the moire-causative spatial frequency component and a matrix defining a smoothing filter characteristic, and

the smoothing filter characteristic is to smooth the entirety of the spatial frequency components to be contained in the image.

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3. The image processor of claim 2, wherein the first filter is a band-cut filter, a spatial frequency characteristic of which presents a minimum value at the moire-causative spatial frequency.
4. The image processor of claim 2, wherein all filter coefficients of the matrix defining the smoothing filter characteristic are of an equal value.
5. The image processor of claim 2, wherein out of all the filter coefficients of the matrix defining the smoothing filter characteristic, a central coefficient of the matrix has a greater value than the other coefficients.
6. The image processor of claim 2, wherein in the case where a plurality of moire-causative spatial frequencies are previously determined, the matrix defining the first filter characteristic is given by a cross convolution operation of matrices respectively defining characteristics of respective filters for attenuating or removing the respective moire-causative spatial frequency components.
7. The image processor of claim 1, wherein in the case where the image is composed of pixels and image data thereof is composed of luminance data and color difference data on each

of the pixels, the moire-removing spatial filter means processes only the luminance data on each pixel.

8. An image processor comprising:

edge extraction means for extracting an edge in a subject image based on image data of the image; and

edge-emphasizing spatial filter means for performing an edge emphasizing process to an image data portion corresponding to the extracted edge,

wherein the edge-emphasizing spatial filter means has a characteristic which is flat in an erroneous-judgment frequency band containing spatial frequencies liable to cause an edge extraction error of the edge extraction means, and

emphasizes spatial frequency components in a spatial frequency band below a lower limit of the erroneous-judgment frequency band.

9. The image processor of claim 8,

wherein the characteristic of the edge-emphasizing spatial filter means is defined by a matrix given by a convolution operation of a matrix defining an emphasizing filter characteristic and a matrix defining a smoothing filter characteristic,

the smoothing filter has a characteristic of smoothing an entirety of the spatial frequency components to be contained

in the image, and

the emphasizing filter has a characteristic of emphasizing the entirety of the spatial frequency components to be contained in the image.

10. The image processor of claim 8,

wherein in the case where the image is composed of pixels and where image data thereof is composed of plural color data pieces obtained through color separation of data on each pixel,

the edge-emphasizing spatial filter means respectively processes the discrete plural color data pieces on each pixel, and

characteristics of the edge-emphasizing spatial filter means in the discrete processes for the color data pieces are defined separately according to a characteristic of each of the color data pieces.

11. The image processor of claim 10,

wherein the characteristic of the edge-emphasizing spatial filter means in the discrete process for each of the color data pieces is defined by a matrix given by a convolution operation of a matrix defining an emphasizing filter characteristic and a matrix defining a smoothing filter characteristic,

the smoothing filter characteristic is to smooth the entirety of the spatial frequency components to be contained

in the image,

the emphasizing filter characteristic used in the convolution operation for defining the characteristic of the edge-emphasizing spatial filter means in the discrete process for each of the color data pieces is to emphasize the entirety of the spatial frequency components to be contained in the image, and

the emphasizing filter characteristic is defined according to the characteristic of each of the color data pieces.

12. The image processor of claim 8, wherein in the case where the image is composed of pixels, image data of the image is composed of plural color data pieces obtained through color separation of data on each pixel and one of the plural color data pieces is black data indicative of pixel density, the edge-emphasizing spatial filter means processes only the black data on each pixel.

13. The image processor of claim 8, wherein in the case where the image is composed of pixels and image data of the image is composed of luminance data and color difference data on each pixel, the edge-emphasizing spatial filter means processes only the luminance data on each pixel.